

## REMARKS

In the above-identified Office Action the examiner rejected claims 1 and 3 under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over JP 3-340774 (Application No., i.e., Published application ("Kokai") No. 5-170802) to Hoshino, et al. ("Hoshino").

Claims 1 and 3 are directed to a waterborne high calcium carbonate pigmented paper or paperboard coating composition including a bimodal emulsion polymer having certain quantities of polymeric particles of at least two different selected sizes, at least one population of which, when dry, contains a void.

### 35 USC 102(b) REJECTION OF CLAIM 1 OVER HOSHINO

The examiner has rejected claims 1 and 3 under 35 USC 102(b) as anticipated by Hoshino because Hoshino discloses a mixture of inorganic pigment such as  $\text{CaCO}_3$  and hollow emulsion polymer particles having a bimodal size distribution. However, Hoshino does not disclose a waterborne pigmented paper or paperboard coating composition which is a "high carbonate" composition, as it is termed in the art, namely, a composition as claimed by applicants (claim 1) in which the pigment includes 50% to 100% calcium carbonate, by weight based on pigment weight. The examiner asserts (Paper No. 11, paragraph 2.) that "the fact is that the pigment of Hoshino .... contains hollow polymer particles in an amount of 3-30% of the pigment mixture, and therefore calcium carbonate is present in an amount of 97-70% of the pigment." Applicants traverse because this is not the literal disclosure of Hoshino. Hoshino in fact discloses [0017] that "the amount in which the above-described emulsion particles are used, while not subject to any particular limitation as long as it is at least 1 wt% of the entire pigment amount, is preferably 2 to 70 wt%, and ideally 3 to 30 wt%. ....during the

mixing of the aforementioned binders, inorganic pigments, and emulsion particles.(emphasis added)". Applicants maintain that the use of an extremely broad range of hollow polymer particles is disclosed (at least 1 wt% of the entire pigment amount) which is nowhere coupled with a conjugate amount of pigment which is exclusively calcium carbonate (as assumed by the examiner in his calculation), but, if anything, with a mixture of pigments which, in fact, is the general state of the paper coatings art. This meaning is reinforced by Hoshino's only specific paper coating composition [0029], in which the pigment contains 27 wt% calcium carbonate (on Hoshino's basis). Applicants respectfully submit that the fair reading of Hoshino is not to the high calcium carbonate compositions claimed by applicants. Since Hoshino does not disclose this element of applicants' claims 1 and 3, Hoshino fails to disclose each and every element of applicants' claim. Applicants therefore, respectfully assert that their claims 1 and 3 are not anticipated by Hoshino under 35 USC 102(b) and request the examiner to withdraw that rejection.

### 35 USC 103(a) REJECTION OF CLAIM 1 OVER HOSHINO

The examiner has rejected claims 1 and 3 under 35 USC 103(a) as obvious over Hoshino because Hoshino discloses a mixture of inorganic pigment such as  $\text{CaCO}_3$  and hollow emulsion polymer particles having a bimodal size distribution. As the examiner points out, Hoshino's disclosed ranges of the amount of polymer particles relative to pigment, the diameter of the larger (hollow) particles and the diameter of the smaller particles exhibit overlap but do not coincide with the selected ranges as claimed by applicants. Further, Hoshino does not disclose, teach, or suggest a waterborne pigmented paper or paperboard coating composition which is a high carbonate composition, as it is termed in the art, namely, a composition in which the pigment includes 50% to 100% calcium carbonate, by weight based on pigment weight, as claimed by applicants. Applicants maintain their analysis of Hoshino's disclosure as presented hereinabove. Applicants

respectfully submit that the examiner has not met his burden in establishing a *prima facie* case of obviousness because he has not pointed to any disclosure within Hoshino which indicates a realization of the problem faced by applicants or which would motivate one skilled in the art to form applicants' composition.

In fact Hoshino's examples provide no teaching or suggestion of increased gloss or brightness through the use of his bimodal system in his relatively low carbonate compositions. In Table 2 (Hoshino's [0031] on page 12 of the translation provided) Hoshino's Comparative Example 1 (a unimodal polymer) exhibits substantially the same white paper gloss and print gloss as each of the Working Examples 1-5. And Hoshino's Comparative Example 2 (a unimodal polymer) exhibits substantially the same white paper gloss and print gloss as Working Example 5, to which it is closely related. The same trends are found for Hoshino's degree of whiteness. The fair teaching of Hoshino, applicants submit, is that his invention offers no suggestion of enhanced gloss or whiteness, thereby providing no motivation *per se* to modify his composition or his pigmentation to afford a gloss or brightness increase. Applicants' invention (Specification, page 2, lines 9-16), on the other hand, is particularly directed to providing high carbonate coating compositions having higher sheet gloss as well as other advantages including brightness. Applicants respectfully submit that Hoshino, taken as a whole, does not teach or suggest their invention and that their claims 1 and 3, therefore, are not obvious under 35 USC 103(a) over Hoshino.. Applicants urge the examiner to withdraw this rejection.

Applicants respectfully request the examiner to pass their claims 1 and 3 to allowance at this time. Applicants' agent is available in order to expedite the allowance of this case at 215-641-7822 or by FAX at 215-641-7027.

DN A01157

CERTIFICATE OF MAILING

I hereby certify that the following correspondence is being deposited as first class mail with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington, DC, 20231 on the date indicated next to my signature below.

Response After Final Rejection

DATE: *January 31, 2003* SIGNATURE: *Arnold D. Schuler*



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